

September 4, 2003 – MEMORANDUM

TO: Cedar and Licking Run TMDL Development Participants

FROM: Kate Bennett, Virginia DEQ, Northern Virginia Regional Office

SUBJECT: Minutes for 07/10/03 Public Meeting

The purpose of this memo is to provide the minutes for the first of three public meetings held for developing the Cedar and Licking Run Bacteria Total Maximum Daily Load (TMDL). The meeting was held at the Catlett Volunteer Fire Department Hall in Catlett, Virginia on July 10, 2003. The meeting began at 7:00 p.m. A list of those in attendance is included as Attachment A to this memorandum.

Ray Graham of the Fauquier County Board of Supervisors, Cedar Run District, facilitated the meeting by providing background on the project, describing activities to date, and introducing the various representatives involved in the project. A Technical Advisory Committee has been established and met in May and the Northern Virginia Regional Commission (NVRC), the consultant responsible for watershed modeling and draft TMDL report preparation, has begun compiling and reviewing available data.

Kate Bennett of the Virginia Department of Environmental Quality (DEQ) discussed the regulatory background of the Commonwealth's TMDL development process and described the applicable water quality standard. This was the first public meeting held in support of TMDL development for Cedar and Licking Runs. The TMDL for bacteria in Cedar and Licking Runs is scheduled to be submitted to EPA for approval in Spring 2004. The goal of the meeting was to describe the proposed approach for TMDL development and to solicit input from watershed stakeholders on both the proposed approach and any potential sources of bacteria in the watershed. Public comments on the proposed approach are encouraged and should be submitted to Kate Bennett, Regional TMDL Coordinator, VA DEQ Northern Virginia Regional Office, 13901 Crown Ct., Woodbridge, VA 22193.

Norm Goulet of NVRC presented the proposed approach for development of the Cedar and Licking Run bacteria TMDLs and reviewed available data. The Cedar Run watershed is approximately 195 square miles and includes the 25 square mile Licking Run watershed. The impaired segment of Cedar Run begins at the Confluence with Mill Run and continues downstream to the confluence with the Occoquan River. The impaired segment of Licking Run begins below Germantown Lake and continues downstream to the confluence with Cedar Run. Potential sources of bacteria in the Cedar and Licking Run watersheds include humans, pets, livestock, and wildlife. Bacterial Source Tracking (BST) is being conducted to help determine the sources of bacteria in Muddy Run. BST results should be available in Fall 2003.

EPA's Better Assessment Science Integrating Point and Nonpoint Sources (BASINS) modeling package will be used to develop the TMDL. BASINS combines the functionality of the ArcView Geographic Information System (GIS) with the Hydrologic Simulation Program – Fortran (HSPF). BASINS will be used to determine the distribution of land use types in the watershed and to estimate the fate and transport of bacteria loadings from these land uses to the stream. The modeling will be focused primarily on six DEQ stations, four on Cedar Run and Two on Licking Run. Land Use in both the Cedar and Licking Run watersheds consists primarily of Forest and Idle Land, followed by Agricultural Land and Low Density Residential Land.

Debbie Cross of the Virginia Department of Conservation and Recreation (DCR) described the TMDL process as consisting of three major parts: TMDL development, Implementation Plan (IP) development, and implementation. DCR is the lead agency in IP development. Development of an IP for Cedar and Licking Runs can begin anytime after approval of the TMDL by EPA, but the focus now should be on developing an accurate TMDL. The schedule for IP development will depend on stakeholder interest and the IP will be coordinated with other watershed planning activities, such as the Chesapeake Bay 2000 agreement, Tributary Strategies and local comprehensive plans.

Copies of hand-out materials provided at the meeting are included as Attachment B to this memorandum. Included in Attachment B are the meeting agenda, and the slide presentation hand-outs for DEQ, NVRC and DCR.

Many questions were asked during the course of the meeting. The following presents a record of the questions raised and responses provided. Note that this record paraphrases the questions and responses, and is not necessarily presented in the same order as the questions were asked.

Question 1: Why were the bacteria criteria changed?

Response: The bacteria criteria were changed at the request of EPA. The new criteria were developed based on a 1986 EPA report entitled Ambient Water Quality Criteria for Bacteria – 1986 (EPA440/5-84-002).

Question 2: How do you differentiate between fecal coliform and *E. coli* bacteria?

Response: There are different analytical techniques for *E. coli* and fecal coliform. *E. coli* bacteria are a subset of fecal coliform bacteria. There is thought to be a stronger correlation between *E. coli* and swimming-associated illness, making it a better indicator of risk than fecal coliform.

Question 3: Where were the samples taken?

Response: Cedar and Licking Runs were assessed as impaired based on bacteria data collected at five DEQ monitoring stations (four on Cedar Run and one on Licking Run): 1aCER006.00, 1aCER009.52, 1aCER016.46, 1aCER25.25, and 1aLIL001.43. The same five stations are being used in the BST study that is being conducted in support of the TMDL. An additional station was added to the upstream portion of Licking Run (1aLIL008.23) to determine whether or not the bacteria impairment continues above Germantown Lake. DEQ water quality data is available on the web at <https://www.deq.state.va.us/webapp/wqm.homepage>.

Question 4: Were the exceedances of the water quality standard seen at high or low flow?

Response: This analysis is not yet complete, but the exceedances are thought to be associated with high flows.

Question 5: Will you take the recent drought and precipitation data into account?

Response: Yes. One of the model inputs is precipitation and the model simulates in-stream flow. The model simulation period will depend to some extent on the availability of input data, but is planned to extend from 1990 to 2002.

Question 6: How is this study different from the one that was done on Owl Run?

Response: The purpose of the Owl Run study was to determine the effectiveness of best management practices (BMPs) at reducing nutrient runoff and improving in-stream water quality. The purpose of the Cedar and Licking Run study is to identify the sources of bacteria in the watershed and to determine the reductions needed in each source in order to meet in-stream water quality standards.

Question 7: The Army Corps of Engineers did a study on the Catlett-Calverton area and found lots of straight pipes and a septic failure rate of 70%. Will these sources be considered?

Response: Failing septic systems and straight pipes will be included in the source assessment.

Question 8: What land use classification system was used?

Response: The land use data were developed using 2000 aerial photography at a scale of 1:200. Land use in the Occoquan watershed has been tracked using aerial photography since 1979.

Question 9: Is Owl Run impaired?

Response: There are no DEQ data available to assess Owl Run. However, the Owl Run watershed is located in the Cedar Run watershed and will be included in the source assessment.

Question 10: You did not mention the building community in your presentations. Will you take the construction industry into account in your source assessment?

Response: All permitted activities in the watershed will be considered. However, construction sites are not usually a major source of bacteria.

Question 11: Is there a water quality station on Licking Run above Germantown Lake?

Response: Yes. Station 1aLIL008.23 was added as part of the BST study.

Question 12: How will you account for the erratic flows over the dam at Germantown Lake? There are no discharge data available for the dam.

Response: The flow over the dam will be estimated using precipitation data and the volume of the dam.

Question 13: How will you account for wetland restoration in the watershed?

Response: The land use in the model is a snapshot in time, and it is understood that substantial changes have occurred in the past several years. Credit can be given in the Implementation Plan for any projects that have been put in place since the streams were listed as impaired (i.e. since 2000).

Question 14: It is very important that the public have input into the TMDL development process.

Response: DEQ will make every effort to solicit and incorporate public input.

Question 15: What other parameters will be modeled?

Response: The TMDL will be developed only for bacteria.

Question 16: Streambank fencing is often recommended to reduce bacteria, but is easily washed out at high flows. There has been no improvement in the Chesapeake Bay despite all of the money spent to restore it.

Response: The population of the Chesapeake Bay watershed continues to grow, making it challenging to simply prevent further degradation.

Question 17: The Vint Hill discharge is going to be diverted to Kettle Run. Wouldn't it make more sense to combine Vint Hill with a system in the Catlett-Calverton area?

Response: The additional capacity needed to serve the Catlett-Calverton area can't be accommodated by the Vint Hill plant. Fauquier County has submitted six options to provide sewer service to the Catlett-Calverton area to DEQ. These options are currently being evaluated by DEQ. One of the six options is to route the discharge from the Catlett-Calverton area to the Remington plant.

Question 18: What is the method for determining the septic failure rate?

Response: Septic systems are inspected when houses are sold and a permit is required for septic system repairs.

ATTACHMENT A

Sign-In Sheet from July 10, 2003 Public Meeting

ATTACHMENT B

Hand-out Materials Provided at
July 10, 2003 Public Meeting